

REMARKS/ARGUMENTS

In the Final Office Action mailed August 17, 2006, claims 109, 292 and 293 were rejected under 35 U.S.C. 102(a) over U.S. Patent No. 5,856,174 to *Lipshutz*. This rejection is respectfully traversed because the methods of microfabricating an elastomeric structure recited in the above claims, as amended, would not make the structure shown in Fig. 2B of the reference.

Claims 109, 292 and 293 of the present invention all include microfabricating a first elastomeric layer having (1) a rectangular or semi-circular arched recess formed therein that forms a flow channel and (2) also having a deflectable membrane formed integral with the first layer. In contrast, the structure shown in Fig. 2B of *Lipshutz* shows a flow channel formed in one layer (*i.e.*, first planar member 106) and a deflectable membrane (*i.e.*, diaphragm 114) formed in a separate, second planar member 112. If, however, Fig 2B of *Lipshutz* is interpreted as having layers 112 and 116 forming an integral layer and interpreted as having 126 define a flow channel and having 114 define a deflectable membrane capable of closing the flow channel, then Applicants' claims 109, 292, and 293, as amended, are clearly distinguishable. That is, if the *Lipshutz* 112 and 116 layers are seen as being integral, then the recess formed within the 112/116 layer is neither rectangular nor semi-circular arched.

Applicants have developed methods for fabricating elastomeric microfluidic devices that contain flow channels that are closable by valve structures defined by deflectable membranes within the elastomeric layer in which the flow channel is defined. As presently claimed, the recess defining the flow channel is a rectangular or semi-circular arched recess. This aspect of Applicants' invention is disclosed at page 30, line 15 through page 31 of the Specification.

Thus, the microfabrication methods described in claims 109, 292, and 293, which have a rectangular or semi-circular arched flow channel and deflectable membrane formed in the same elastomeric layer, would not make the structure shown in *Lipshutz*. Conversely, the methods used in *Lipshutz* to make a structure with a flow channel and flexible membrane formed in different layers (as shown in Fig. 2B) and with feature geometries that define the *Lipshutz*

diaphragm valve structure for sealing a reaction chamber (*Lipshutz*, column 16, line 42 *et seq.*) do not describe or suggest the methods described in claims 109, 292, and 293. For at least this reason, claims 109, 292, and 293 are allowable over *Lipshutz*, and withdrawal of the rejection of the claims under 35 U.S.C. 102(a) over the reference is respectfully requested.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,

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